

The Honorable Robert J. Bryan

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT TACOMA**

BUILDING INDUSTRY
ASSOCIATION OF WASHINGTON;
AIR AMERICA INC.; AIREFCO INC.;
BOA CONSTRUCTION CO.,
COMPLETE DESIGN INC.; CVH INC.;
ENTEK CORP.; SADLER
CONSTRUCTION INC.; TRACY
CONSTRUCTION CO.,

Plaintiffs,

v.

WASHINGTON STATE BUILDING
CODE COUNCIL,

Defendant,

and

NW ENERGY COALITION, SIERRA
CLUB, WASHINGTON
ENVIRONMENTAL COUNCIL, and
NATURAL RESOURCES DEFENSE
COUNCIL,

Defendant/Intervenors.

NO. 3:10-CV-05373-RJB

DECLARATION OF TIM NOGLER

I, TIM NOGLER, am over 18 years of age and am competent to make this Declaration.
The following, based on my personal knowledge, information, and belief, is true. I declare and
state as follows:

DECLARATION OF TIM NOGLER
NO. 3:10-CV-05373-RJB

1

ATTORNEY GENERAL OF WASHINGTON
Agriculture & Health Division
7141 Cleanwater Drive SW
PO Box 40109
Olympia, WA 98504-0109
(360) 586-6500

1 1. My name is Tim Nogler. I am the Managing Director of the Washington State
2 Building Code Council (Building Code Council) and have held that position for fourteen (14)
3 years. In that role I am responsible for managing the rule making and open public meetings of
4 the Council and directing staff activities. My job is to work closely with the Chair of the
5 Building Code Council to set agendas, comply with statutory duties, appoint work groups, and
6 present technical issues, in accordance with Building Code Council policy and procedures and
7 by laws.

8 2. The Building Code Council promulgates Washington's building codes,
9 including the building energy code. The Building Code Council consists of fifteen (15)
10 members appointed by the Governor representing a broad spectrum of stakeholder interests,
11 including two county elected legislative body members; two city elected legislative body
12 members or mayors; one local government building code enforcement official and one local
13 government fire service official; one member representing general construction, specializing in
14 commercial and industrial building construction; one member representing general
15 construction, specializing in residential and multifamily building construction; one member
16 representing the architectural design profession; one member representing the structural
17 engineering profession; one member representing the mechanical engineering profession; one
18 member representing the construction building trades; one member representing
19 manufacturers, installers, or suppliers of building materials and components; one member
20 representing the disability community; and one member representing the general public. The
21 council also includes several ex officio nonvoting members with all other privileges and rights
22 of membership: two members of the House of Representatives appointed by the Speaker of the
23 House, one from each caucus; two members of the Senate appointed by the President of the
24 Senate, one from each caucus; and an employee of the electrical division of the Washington
25 State Department of Labor and Industries.
26

1 3. I am extremely familiar with the history and content of Washington's 2006 and
2 2009 building energy codes. I have attached copies of both codes to this declaration as
3 Attachment A and B.

4 The versions that I have attached are published by the Building Code Council. I am
5 attaching these versions, rather than the official versions published in the Washington
6 Administrative Code, because these versions are duplicates of what is published by the
7 Washington Code Reviser in the Washington Administrative Code but are formatted for ease
8 of reading.

9 Subsequent to the initial promulgation of the 2009 building energy code, the Building
10 Code Council went through the rule revision process to correct a number of minor errors in the
11 rules. These editorial changes to the building energy code are final and are incorporated into
12 the formatted version of the rules.

13 4. The 2009 building energy code was adopted by the Building Code Council on
14 November 20, 2009, with a July 1, 2010, effective date. The Council subsequently extended
15 the effective date to January 1, 2011.

16 5. Chapter 9 was based upon a proposal from the Washington State Department of
17 Commerce Energy Policy Division, as refined by the work of the Building Code Council's
18 Energy Technical Advisory group. The technical advisory group consisted of members
19 representing affected industries including Building Industry Association of Washington
20 (BIAW), environmental groups, and local governments.

21 6. Based on the technical advisory group's extensive discussions and negotiations
22 with stakeholder groups, and in response to a motion by the BIAW's representative, the
23 Building Code Council reduced the energy savings required in Chapter 9 from 24% (three
24 credits) as originally proposed by the Department of Commerce to the 8% (one credit)
25 ultimately included in the rule.
26

1 7. I was present at the May 15, 2009, technical advisory group meeting. I caused
 2 the proceedings to be recorded on tape by my staff, and I listened to the recording. The
 3 following is a verbatim excerpt of the recording and accurately reflects a motion and
 4 supporting statements made at that meeting by the BIAW's representative on the technical
 5 advisory group:

6 *I would make a motion to reduce the points and that motion would be to reduce*
 7 *it to one point and let it run as a trial for the code cycle and let building*
 8 *officials get their arms around it. That's better than canning the whole thing.*

9 *... the ideal behind one point is and I understand what you are saying David*
 10 *and Ren, but who this affects is production builders and they are the ones who*
 11 *are going to take the burden and bulk of this thing. It gives them a three year*
 12 *cycle, it's put in the code, it's there so everybody gets used to it and you've got*
 13 *get one point. They can try this, or try that there's the buyer's contest thing. It*
 14 *gives a whole period of time without a huge impact for everybody to find what*
 15 *works and then in the next code cycle we can edit it, change the points, do*
 16 *things like this and make the incremental improvements, but it's not pounding*
 17 *the hammer in and taking one industry and crashing everything on top of them.*
 18 *It is a reasonable solution and it has balance. That's what this is about. We*
 19 *know where you are going with it and that it can work, but give it some time.*
 20 *Don't jump on one industry or the risk there is BIAW fights it all the way and*
 21 *you get zero at the Council level. So respect that we would support one point.*

22 8. I was present at the Building Code Council's public meeting on October 15,
 23 2010. At that meeting the Building Code Council approved a clarification of section 504.2.1 of
 24 the 2009 building energy code related to domestic water heaters, to clarify that these
 25 appliances must meet the National Appliance Energy Conservation Act (NAECA) and be so
 26 labeled. (State Building Energy Code Interpretation No. 10-04). This clarification was
 necessary because the reference to the NAECA has been inadvertently left out of the published
 version of the 2009 building energy code, although it was in the 2006 version.

 9. In Washington's 2006 building energy code, application of the code was a two-
 step process.

1 10. As an initial step, a builder applied general requirements for insulation,
 2 moisture control, air leakage control, mechanical systems including duct sealing, water
 3 heating, and lighting. 2006 Building Energy Code Chapter 5 §§ 502.1.4, 502.1.5, 502.1.6,
 4 502.4, 503, 504, 505.

5 11. In the second step, the builder could select from three compliance pathways: a
 6 systems analysis performance pathway (Chapter 4); a building envelope tradeoff performance
 7 pathway (Chapter 5); or a prescriptive requirements pathway (Chapter 6).

8 12. The 2006 building energy code did not have any requirements that exceeded the
 9 federal minimum standards under the Energy Policy and Conservation Act (EPCA). See, e.g.,
 10 2006 building energy code §§ 503.4 (requiring heating equipment to meet the requirements of
 11 the NAECA and be so labeled) and 504.2.1 (requiring storage water heaters to meet the
 12 NAECA requirements and be so labeled).

13 13. In drafting the 2009 building energy code, the Building Code Council retained
 14 the structure of the 2006 building energy code and the two step process.

15 14. In the 2009 building energy code, builders still comply with the general
 16 installation requirements in Chapter 5 then choose from the three pathways: the Chapter 4
 17 systems analysis performance pathway, the Chapter 5 building envelope tradeoff performance
 18 pathway, or the Chapter 6 prescriptive pathway.

19 15. In the 2009 building energy code revision cycle, the Building Code Council
 20 modified the 2006 business energy code in two important ways.¹

21 16. First, the Building Code Council modified Chapters 4, 5, and 6 to reduce energy
 22 usage in buildings constructed under each pathway, by approximately 7% over the 2006
 23 building energy code. Chapters 4, 5, or 6 still contain no standards that exceed the federal
 24 minimum standards under EPCA.

25
 26 ¹ The Council made other changes but they do not affect the application of Chapter 9.

1 17. In addition, the Building Code Council added Chapter 9 to the 2009 building
2 energy code, for approximately 8% additional energy savings, added to the 7% savings reached
3 by their revisions to Chapters 4, 5, and 6 of the 2006 building energy code.

4 18. The 8% savings achieved in Chapter 9 plus the 7% savings achieved in
5 Chapters 4, 5, and 6, achieve the "target" of an overall energy savings of 15% in the 2009
6 building energy code as compared to the 2006 building energy code baseline.

7 19. Chapter 9 presents a menu of options for builders who are building under
8 Chapter 5 or 6. Builders may select from the options to achieve the required one (1) credit
9 (8%) increase in energy efficiency. Option 7, which *deducts* one (1) credit for large dwelling
10 units exceeding 5000 square feet, does not count as an option for complying with the Chapter 9
11 one (1) credit requirement. The underlying rationale for including Option 7 in Table 9-1 is that
12 even where the two houses are built to the same building energy code, with identical levels of
13 insulation and heating and cooling system efficiency, the larger house uses more energy for
14 heating and cooling, since more area is exposed to heat loss or gain and it has a larger volume
15 of air that must be heated or cooled.

16 20. The energy savings achieved by each of the Chapter 9 options is expressed in an
17 analysis of the options conducted by Mr. Dave Baylon and Ecotope, Inc. The analysis is
18 attached hereto as **Table 1** and **Table 2**. **Table 1** and **Table 2** are from a final draft report by
19 Ecotope, Inc., to the Washington State Building Code Council. The analysis reflects the final
20 version of Chapter 9 building energy codes, as adopted by the Building Code Council.²

21 21. The Ecotope Inc., analysis of the 2009 Chapter 9 building energy code
22 provisions as they were ultimately adopted by the Building Code Council was based on work
23 done to develop the original code proposals, as revised by the energy technical advisory group
24

25 ² Chapter 9 building energy code as adopted, contains a requirement for one (1) credit, (roughly 8%)
26 additional energy efficiency to be gained through the Chapter 9 building energy code options. The original
Chapter 9 building energy code change proposal contained a requirement for three credits, which was reduced to
two credits, then to one credit in the final version adopted.

1 to the Building Code Council; the energy technical advisory group includes Dave Baylon, the
2 President and Principal of Ecotope, Inc.

3 22. The Ecotope Inc., analysis examines each Chapter 9 building energy code
4 options in comparison to the base requirements of both Chapters 5 and 6 in the 2009 business
5 energy code. This demonstrates the relative percentage savings of each option beyond the
6 basic code requirements for all buildings. The methodology used for the analysis is a
7 prototypical analysis using a computer simulation of the heating and cooling impacts of each
8 option in Chapter 9. The approach involves a three-step process:

9 1) Develop a set of prototypes that describe typical home
10 construction. This was done using the standard analytical prototypes used by
11 the Northwest Power and Conservation Council to develop and evaluate energy
12 forecasts and conservation plans for the region's utilities. Four such prototypes
13 were used in this analysis: a 1344 square foot ranch style home, a 2200 square
14 foot split level home, a 2688 square foot home with a full conditioned basement,
15 and a large home of 5000 square foot with a full conditioned basement (meant
16 to represent the large home option in Table 9-1 of the 2009 building energy
17 code).

18 2) Simulate the energy impacts of each option in Chapter 9, Table
19 9-1 using the Simplified Energy and Enthalpy Model (SEEM) simulation
20 program. Each option was analyzed separately for each prototype. Both the
21 Seattle and Spokane climates were used to represent Climate Zones 1 and 2,
22 respectively, as set forth in the building energy code.

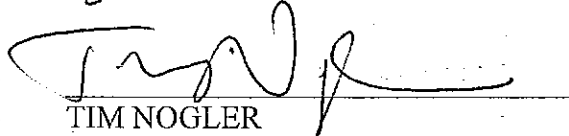
23 3) Combine the impacts of climate and house size to determine the
24 relative impact of each option in the Table 9-1.
25
26

23. Table 1 shows the average percent reduction in total home annual energy use that each of the Chapter 9 building energy code options will achieve, for both a Chapter 5 baseline and a Chapter 6 baseline. The average energy savings is a weighted average across each climate, prototype, and home heating system. The table shows energy savings that are normalized based on the credits assigned to each option.

24. Table 2 presents more of the details of the analysis than Table 1. It shows the savings for each Chapter 9 building energy code option for both a Chapter 5 and Chapter 6 baseline, measured as both energy savings (the reduction in annual energy use achieved by each option) and energy cost savings (the reduction in a homeowner's energy bill achieved by each option). The savings are calculated separately based on the home's primary heating system: gas, heat pump, or electric zonal. The average absolute savings achieved by each measure are shown in addition to savings that are normalized based on the number of credits assigned.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed at Olympia, Washington this 3rd day of November 2010.


TIM NOGLER